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The three years of the first round of the Japanese Program for Professionals ended in September, 1996, having accomplished much: the successful establishment of a ground-breaking Japanese language program, development of a working series on Teaching Technical Japanese, advances in such R&D projects as Japanese language learning software applications, and raised awareness among management executives of the value of this kind of program. Results were solid: graduates are incorporating the JPP experience into their jobs to improve their organizations' dealings with Japan, and the program has gone on to a Round Two, a further step in becoming a self-sustaining program.

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Japanese Program for Professionals
Grant # F49620-93-1-0614

Final Technical Report

30 November 1996

JPP Final Technical Report
Grant # F49620-93-1-0614

I.   Abstract of Technical Progress

The three years of the first round of the Japanese Program for Professionals ended in September, 1996, having accomplished much: the successful establishment of a ground-breaking Japanese language program, development of a workshop series on Teaching Technical Japanese, advances in such R& D projects as Japanese language learning software applications, and raised awareness among management executives of the value of this kind of program. Where we did not proceed exactly as planned, it was simply because the landscape proved to be different enough once we arrived that it necessitated a different approach. The results were nonetheless solid: graduates are incorporating the JPP experience into their jobs to improve their organizations' dealings with Japan, and the program has gone on to a Round Two, a further step in becoming a self-sustaining program.

II.   Objectives

Objectives for the Japanese Program for Professionals (JPP) remained the same throughout its three years of operation. JPP was set up to respond to the increasing demand for American scientists, managers, and technology professionals conversant in Japanese language and culture. To this end, it provided an intense language-learning experience geared towards working professionals that took into account the limitations of a work schedule. JPP had several objectives, primarily and secondarily related to the above-stated overall goal; they were:

- To create a core of technology professionals in both private industry and federal research labs who are able to communicate in Japanese and who understand Japanese culture.

- To familiarize technical professionals with Japanese business and management, technology policies, and other technology-related issues.

- To provide these professionals maximum opportunities to do internships in Japan.

- To conduct research focusing on methods and tools for remote language training.

- To provide academic institutions and other related organizations with opportunities for the exchange of information on teaching Japanese to scientists and engineers.

- To provide opportunities for the exchange of Japanese technology information.

III.   Status of Program

JPP set out to provide quality instruction in Japanese language, culture, and business practices to science and technology professionals, and to do so in the most efficient and effective manner possible. The "first round" of the program, which is what this report covers, was a learning experience for program teachers and staff as well as for

the students, as JPP management discovered what worked and what did not. The first round set a strong foundation for a program that staff hopes to transform into a permanent, self-sustaining operation.

In sum, the program succeeded beyond its expectations in the number of students it attracted, in its low attrition rates, in the R&D work it was able to pursue, in the achievements of its workshop, and in the less easily measurable increase in general awareness, especially among corporate management executives, of the value of this kind of training. JPP did not always reach its destination via the path it had originally laid out for itself, but it arrived nonetheless. This report will summarize the activities and accomplishments of JPP's first three years, the period covered by Grant # FY9620-93-1-0614.

A.   *Initial Promotion and Participation*

During the establishment phase of the program, JPP staff pursued promotion through open houses, personal contacts, advertisements in business journals, and mail campaigns. Staff expected original participants to number 25, but exceeded this goal by 100%, attracting 50 students from five sites. Several more students joined the program after it had begun. Over the course of the two-year program, a number of students dropped out, leaving the final number at 34—only 32% attrition, low for a Japanese program. (Typically, Japanese programs see 50% attrition within the first year.) Half of the student losses were due to job transfers. Student motivation, however, remained high throughout the two-year program in spite of its demanding nature.

B.   *Participation, by Organization as well as by Individual, as of December 15, 1996, Program Completion Date*

Participation in JPP was solicited at the organization, or company level, as JPP was structured to bring classes to work-sites. Four organizations signed on, although more expressed interest; most of the latter were unable to participate due to lack of support at a management level. A brief description of each participating company or organization appears below.

At an individual level, 34 students completed the program on December 15, 1995. These students, as well as those who began the program and then left, are listed below. A list of participating students and their titles appears in V.B., "Professional Personnel Associated With the Program: Professional Personnel at Participating Sites."

1.   <u>Battelle Pacific Northwest National Labs, Richland, Washington</u>

PNNL contains seven technical centers: Applied Physics Center, Earth and Environmental Sciences Center, Molecular Sciences Research Center, Life Sciences Center, Materials and Chemical Sciences Center, Engineering Technology Center, and Technology and Planning Analysis Center. Housed within these centers are approximately 460 individual labs and 1,436 scientists and engineers out of a total staff of 4,500. Scientists at Battelle/PNNL have expressed several areas of interest in technological developments in Japan, among them: robotics, micro-electromechanical systems, nuclear and other wastes, pollution mitigation and control, bio-remediation of contaminated sites, chemical science and engineering, and computer science. Areas of current involvement with Japan include: collaboration on materials testing of alloys in irradiation environments; research to develop a tritium breeder for fusion reactors; developing an agreement for research programs on irradiation effects on structural integrity of pressurized water reactor

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internals; in-situ vitrification for remediation of contaminated sites; nuclear waste management, and low-level nuclear waste management.

Participants
Who Completed JPP: Job Title
Judi Cuta   Senior Development Engineer
Peggy Hamilton   Research Scientist
Carol McDonald   Research Engineer
Pete McGrail   Staff Scientist
Ron Palowski   Research Engineer
Colleen Winters   Technical Communications Specialist

Former Participants:		Reason for Leaving
Tom Adams	Staff Scientist	Got a new job elsewhere
Frank Garner	Senior Staff Scientist	Increasing travel demands of job created a time conflict
James Hardin	Staff Scientist	Transferred to Texas

2.   Idaho National Engineering Labs, Idaho Falls, Idaho

INEL is a multi-purpose Department of Energy Laboratory with approximately 3,350 scientists and engineers. Major fields of research include: nuclear reactor safety, environmental restoration and waste management, electric vehicles, biotechnology, transportation, information infrastructure, textiles, agriculture, materials, energy efficiency, arms control, and engineered systems. There is a high level of interest in such Japanese technological developments as: fusion safety, hazardous waste treatment, and isotope production. Areas of current involvement with Japan include: radio isotope production, geothermal energy research, hazardous waste treatment, fusion safety, and a project with the Japan Atomic Energy Research Institute.

Participants
Who Completed JPP: Job Title
Idaho Operations:
Wendy Carlson   Technical Support Program Staff
Bill Harker   Program Manager, Infrastructure Management
Walter Sato   Manager, Waste Programs Office
James Werner   Team Leader, Office of Program Execution, Nuclear Engineering
John Yankeelov   General Engineer, R&D Programs, Electrical Engineering

Lockheed*:
Mark Argyle   Engineering Specialist, Chemical Engineering
Frank Bruneel   Mechanical Engineer
Stephen Herring   Sr. Engineering Specialist, Nuclear Engineering
Dean Miyasaki   Engineering Specialist, Chemical Engineering
Frank Roberto   Scientific Specialist/Technical Leader, Molecular Biology

Former Participants:		Reason for Leaving
Jonathan Nadler	Nuclear Engineer	Time conflict
Kristine Svinicki	Nuclear Engineer	Transferred to D.C.
Eugene Hochhalter	Manager, Waste Handling & Project Liaison, Nuclear Eng.	Time conflict

Judy Lussie	Engineering Graphics Supervisor	Work/family conflict
Tom Dolan	Principal Scientist, Nuclear Engineering	Transferred
Jeffrey Mousseau	Project Manager, Waste Management, Mechanical Engineering	Time conflict
Scott Spaulding	Manager, Mechanical Engineering Unit, Civil Structural/Mechanical Engineering	Work/family conflict

* The contracting agency for INEL was EG&G Westinghouse until October, 1994, at which time it switched over to Lockheed.

3.　　Naval Air Warfare Center, Indianapolis, Indiana

　　　NAWC integrates avionics management, engineering, acquisition, technology insertion, and manufacturing enterprises, and employs approximately 800 engineers and scientists, out of a total of approximately 2,500 personnel. Major fields of research include: engineering and design of avionics equipment, materials analysis, failure analysis, software engineering, digital avionics simulation, aircraft subsystems integration, Global Positioning System testing, and manufacturing technology. NAWC is currently involved with Japan in the FS-X program.

Participants
Who Completed JPP:　　　Job Title

Who Completed JPP:	Job Title
Ben Krug	Project Area Leader, Electrical Engineering, Platform Sensor System
Judith Mackenzie	Lead Engineer, Materials, Manufacturing and Systems Engineering
Trung Nguyen	Avionics Software Engineer
Celeste Sexton	Project Leader, Electrical Engineering

Former Participants:		Reason for Leaving
David Lutzow	Project Leader, Elec. Engineering	Time conflict
Andy Price	Project Leader, Bio-Engineering	Time conflict

4.　　Boeing, Seattle-area (two sites: Everett and Renton), Washington

Participants
Who Completed JPP:　　　Job Title

Who Completed JPP:	Job Title
Tim Adams	Structures Analyst
Val Brustad	Research Engineer
Lou DeLeon	Lead Engineer
William Dutcher	Engineer
Ryan Edge	Senior Engineer
Bharat Kapadia	Senior Specialist Engineer
David McKenna	Engineer
Kenneth Medley	Specialist Engineer
Linnea Roeser	Payload Lead Engineer
Aniceto Seto	Engineer

David Tarr	System Design Engineer	
Hal Underwood	Engineer	
David Wakabayashi	Engineer	

Former Participants:		Reason for Leaving
Kerry Kimes	Engineer	Laid off
Susan Ng	Engineer	Promoted to a position in China
Richard Nguyen	Engineering Representative	Work/health conflict
Roshan Vasudev	Engineer	New job in California
Nathan Wilson	Engineer	New job in France
Michael Yuen	Engineer	Time conflict
Sharon Yuen	Senior Engineer	Transferred

C.   *Staff Hiring and Reclassification/Current Status*

As at any dynamic organization, JPP has had its share of staff changes. These are detailed here.

In the fall of 1993, TJP staff conducted a search to locate some of the key personnel that would be needed to run the Japanese Program for Professionals. This included a search for a Chief Instructor, a Network Systems Manager, and Local Facilitators at the five sites. Also during this establishment phase, Miriam Rich, part-time Technical Japanese Program Coordinator, was re-classified to be a full-time manager of JPP.

Sandra Mizuno, a skilled high school Japanese instructor of six years' experience, was hired as the Chief Instructor. Dave Buzard was brought on as Network Systems Manager to set up the computer support necessary to conduct the operation.

Minako Takahashi, Michiko Yamamoto, Todd Clegg, Kurt Bringerud, and Yoriko Sanders, were hired as local facilitators. In March of 1994, before JPP began, the local facilitators came to Seattle for a one-day training and orientation session to explain the program to them, and to brief them on their responsibilities and program expectations. Again in June, local facilitators came to Seattle for an additional training session.

To cope with the double enrollment and hence increased work load, JPP enhanced the teaching staff by promoting Minako Takahashi, a local facilitator for a Boeing site, who had also been serving as the Chief Instructor's Assistant, to full-time lecturer in September of 1994. Ms. Takahashi was responsible for providing oral drills, developing teaching materials and tests, conducting and coordinating tests, evaluations, and intensive sessions, serving as liaison between teaching staff, site facilitators and students, lecturing on culture and society, and acting as stand-in lecturer for Ms. Mizuno. The planned hiring of student assistants did not occur, as we discovered that a full-time lecturer was able to work much more effectively than graduate assistants.

In December of 1994, Sandra Mizuno left on short notice to take a job in Ohio. During the time we were engaged in a search for her replacement , Dr. Michio Tsutsui stepped in as Chief Lecturer, giving lectures for both Winter and Spring Quarters of 1995. Ms. Mizuno was replaced by Keiko Nakamura, who was hired on in June, 1996. Ms. Nakamura has a master's degree in Asian Studies from the University of Illinois at Champaign-Urbana.

In the summer of 1995, Jon Wiederspan and Dave Buzard left, to be replaced by Brad Mohr, who was hired on as Senior Computer Consultant. Raye Westad, program assistant, became full-time in July, 1995 in order to help handle the increased activity of workshop and intensive session planning and coordination. The five local facilitators hired during the start-up phase remained with the program.

D.   *Instruction - General*

The logistics of instruction changed somewhat over the course of the two-year program, as staff and instructors learned what worked and what did not. In spite of the changes, quality results were achieved. The evolution of the instructional process is described here.

As outlined in the proposal, JPP began with an intensive session of several days length. All sites except Boeing participated. As Boeing joined a week later, a special make-up session was held exclusively for them. Intensive sessions were held twice a year, but condensed from four days to three, as staff discovered that this worked better with students' work schedules. (See Appendix 1: Intensive Sessions.) Intensive sessions were used to introduce complex new material, provide intensive review and reinforcement of previously learned material, and provide exposure to cultural differences. They also allowed students from the various sites to bond and interact with each other, so that students at the Naval Air Warfare Center in Indiana, for example, could meet and share their experiences with Boeing employees. This cross-fertilization was a valuable aspect of the intensive sessions.

For the first year, lectures were broadcast via satellite twice a week from the University of Washington and received live by two sites. A live audio link made limited interaction possible. Later, rising satellite costs made this means of delivery prohibitive. When satellite use was discontinued, lecture tapes were delivered overnight to the various sites. This proved to be just as effective, and although the live interaction was lost for the lectures, it was not as necessary for this portion of the instruction, which consisted of introduction and explanation of new material. Local Facilitators, or Drill Instructors, as they came to be called, supplemented lectures by providing instruction on-site three times a week.

Also during the first year, the two local sites were able to take advantage of cable broadcasts of JPP put on by UW TV—the University of Washington cable channel. Both the language and the special courses were shown on this channel, allowing a larger audience to benefit from the training. These broadcasts were discontinued the second year as the cost of broadcasting rose.

The site visits by the Chief Instructor to the five different instruction sites proved effective as a means of assessing student progress, allowing for feedback and communication with site instructors and students, as well as providing motivation for students. The one drawback of this feature was the frequency of site visits: we started by having the Chief Instructor visit each of the five sites once a month. Then, as it became apparent that this was too demanding of the site instructor, we changed the structure so that the Chief Instructor alternated visits with the Chief Instructor's Assistant, and site visits were reduced to two per quarter.

The frequency of weekend sessions was also changed: instead of holding them once a month, we moved to holding them twice per quarter. This helped reduce work conflicts and made it possible to accommodate more participants.

At the completion of the two-year program, staff had a good idea of how to gear the material for maximum benefit to the JPP student body. The amount of work demanded had remained high, but teaching staff made every effort to work closely with students in helping them obtain mastery of the subject matter.

Results testified that the material taught was appropriate, and that JPP teaching methods are sound and effective; JPP students who went to Japan for work reported that the program had trained them well. (See Appendix 3: Student Testimonials.)

E.   *Communications*

Due to the nature of the Japanese Program for Professionals—with remote class sites and local facilitators at the remote locations who also had other professional obligations—communication was of prime importance. This was an area in which we sometimes had problems, as we had to rely on technology—fax machines, phones, e-mail, and message machines—which occasionally malfunctioned, did not connect, or simply were not turned on! (See VII.E. "New Discoveries: Problems of Distance Language Learning.") Staff and instructors worked hard to alleviate these problems, and we sent our computer staff person to each site to assess their communication needs and make recommendations.

F.   *Intensive Sessions*

The first intensive session was held for four days in March, 1994. It launched the program, providing an extended period of time for participants to focus exclusively on their study of Japanese language and culture. Participants heard first-hand from individuals who had completed an internship in Japan; they learned about gender-related issues in Japan; they practiced introducing themselves and exchanging business cards in Japanese. (See Appendix 1: Intensive Sessions.)

The second intensive session, held October 5-9, 1994, met from Wednesday afternoon through Sunday morning.

After the second one, intensive sessions were shortened from four days to three as mentioned in III. D above; instructors found that three full days—Thursday, Friday, and Saturday—worked well to present the necessary material and language environment stimulus intended in an intensive session. To take more than two days off from work for most JPP students was quite difficult. Three days was arrived at as a good balance, and was successful for the last two intensive sessions, held March 30-April 1, 1995 and October 5-7, 1995. Appendices 1: A-D show the complete schedules for each of the intensive sessions.

G.   *Special Courses*

JPP coordinated with three other UW schools, the School of Law, the School of Business, and the Jackson School of International Studies, to provide four "Special Courses"—courses of special interest relating to Japanese law, technology transfer, and business practices. These classes were meant to supplement the language courses.

They were: "Japanese Business and Management Practices," taught by Professor Jerry Sullivan of the Business School during Autumn Quarter, 1994; "Japanese Technology: Policies, Institutions and Practices," taught by Professor Marie Anchordoguy of the Jackson School during Winter Quarter, 1995; "Intellectual Property Law in East Asia," taught by Professor Paul Liu of the Law School during Spring Quarter, 1995; and "International Contracting: Negotiations and Drafting - US/Japan," taught by Professor John Haley, also of the UW School of Law. These lectures were delivered to the JPP sites via satellite and videotape, and to general viewers in the Greater Seattle area via Cable TV.

H.   *Internship Development and Promotion*

Internship placement has been an important part of the Japanese Program for Professionals for both students and staff, although only a few have become reality as of this writing. Whether or not students performed an internship, though, should not be looked at as the only measure of success regarding the internship aspect of JPP. Significant gains were made in subtle ways, for example, a change in the attitude of management executives, as happened with Boeing, detailed below. These less tangible results are also important.

Students looked forward to internships as the ultimate reward for all their hard work and as a real-world classroom in which they could test their knowledge. The possibility of an internship, then, served as a great motivator. The reasons that more internships did not come through relate principally to the following simple fact: people are unable to take an extended leave from work.

Staff, for their part, worked hard with the other JITMT centers and with MITI/JETRO to secure internships for participants. The Director talked to several companies and universities in Japan regarding the setting up of internships. Throughout the program, every effort was made to keep students aware of internship possibilities. Students were informed of the possibility of doing an internship at the outset; they knew this was the final goal of the program, and generally how it would work. At the last two intensive sessions, special time was set aside to present and discuss internship opportunities. Throughout the two years of JPP Round I, internship opportunities were also heavily publicized via e-mail.

Almost all of the students expressed great interest in doing an internship. However, only two JPP students have actually gone to Japan for work assignments.

There are several reasons for this. Because JPP students are key players at their organizations, many found it very difficult to take time off from work, oftentimes even for the two days necessary to come to the Intensive Sessions. Management executives that these students report to were simply unwilling to let them go for an extended period of time. In addition to weak management support, students mentioned unstable job situations and schedule conflicts as reasons why they were unable to pursue internships.

At Boeing, upper-level management eventually realized the value of internships as they learned the value of JPP. This happened gradually, over an extended period of exposure to the program. Boeing management finally decided that learning about Japan should not be done on an individual basis, but should be a company-wide effort to train people in Japanese and send them to Japan. That Boeing is now aware of the importance of this kind of activity is a real advance, and testament to the efforts of the Boeing students. In fact, Ryan Edge, Senior Engineer at Boeing, returned from a three-month work

assignment at JAMCO, an interior facilities company, in July of 1996. JAMCO is one of Boeing's key suppliers, making lavatories that go into Boeing jets.

Another Boeing employee and Research Engineer, Val Brustad, will go to Japan on October 2, 1996 for a four-month placement at Suzuki. This is through the U.S.-Japan Manufacturing Technology Fellowship Program, a Department of Commerce initiative.

Although these two incidents are commendable, it remains to be seen whether Boeing will follow through and actually work to create more such opportunities for its employees. Both of these internships, it should be noted, came about due to the efforts of the individual himself. JPP efforts to work with Boeing have been stymied in several ways: not being allowed to promote our program internally, Boeing students having to go through all sorts of "checks and balances" within Boeing before being able to do anything, and simply having to deal with Boeing's much longer time frame. All these factors make it difficult to proceed with an innovative course of action.

Students at Battelle/Pacific Northwest National Labs have encountered some of the same resistance among management as have the Boeing students, but have also had opportunities to travel to Japan for work. Frank Garner, Senior Staff Scientist there, has gone to Japan on several occasions to work with Mitsubishi Corporation in developing programs in the nuclear power industry. He has also worked with Tokyo Electric Power Company and Kyoto Electric Power Company. Pete McGrail, also a Staff Scientist at PNNL, is setting up a short-term work assignment with Power Reactor Nuclear Fuels Corporation (PNC) in Tokai-mura, Japan. Others at PNNL continue to look for opportunities.

No INEL or NAWC students have yet gone to Japan, although their organizations have projects with Japanese. Once again, this has been principally due to the fact that managers of these students are not ready to release them from their jobs for an extended period of time.

I.   *Computer Projects/Network Services*

The Japanese Program for Professionals has consistently put cutting edge technology in the arena of computing to use for its benefit. It put up one of the first World Wide Web sites at the University of Washington, appearing on the Web in March, 1993. It has used Apple's QuickTime software in its development of Nihongo Partner, a language learning application. It has also used powerful new server technology to provide service for dial-in access. Because of the rapid changes in technology, and the astute use of these developments by JPP staff, much has been accomplished in the R&D and computer network facets of JPP. The program's Web site address is: <http://www.tjp.washington.edu/jpp/>.

1.   Nihongo Partner

Nihongo Partner is one of two major software development efforts undertaken by JPP. It is an interactive multimedia computer program designed to help students learn effective oral communication. The program contains a library of short, digitized video segments of typical Japanese business and technical interactions. Each video segment focuses on a specific task or situation and involves a short dialogue. By presenting realistic situations using video segments and an interactive interface, Nihongo Partner allows users to develop verbal and non-verbal communication skills on their own, an important tool for distance learning. Nihongo Partner will be delivered both on CD-ROM and on the Internet.

When JPP began, Nihongo Partner was a basic application shell with only one video segment digitized. Since then, more than 15 segments have been created, filmed, and digitized. These segments deal with crucial business situations, including exchanging greetings, making requests, requesting/granting permission, extending invitations, asking for/giving advice, transferring messages, and expressing gratitude.

Several technology improvements have also been incorporated into the program. The early prototype version suffered a number of problems as a result of the development platform used. The current version, however, makes excellent use of currently available technology, including much improved video quality through the utilization of Apple Computer's QuickTime version 2.5. In addition, the new development tool (SuperCard) provides excellent cross-platform support for a future Microsoft Windows version of the program.

The new version also separates the multimedia *content* from the presentation medium. This architecture makes it possible to add additional content modules developed locally or by other sites without reworking the primary interface. It also simplifies the development of other delivery schemes, such as the World Wide Web. And, when presented at the national Computer-Aided Language Instruction Consortium (CALICO) conference in May, 1996, it generated interest for use with other languages as well.

Although bandwidth constraints continue to be a concern with WWW-based delivery of multimedia content, recent improvements in web browsers (including inline QuickTime and Java scripting support) have alleviated many of the other concerns with this delivery medium. Current technology will now allow us to deliver substantially similar content to both local and distant users.

2. TJ Tutor

The second major development effort is TJ Tutor, an extensive Japanese database containing kanji and kanji compounds, as well as field-specific technical vocabulary. As in the case of Nihongo Partner, the TJ Tutor program has undergone extensive architectural changes over the past two years. The database was upgraded to a full-strength relational database developed in Butler SQL. Butler provides a number of interface options that will allow rapid prototyping and development of client applications for individual needs, including an excellent database-to-web connection ("Tango").

This improved architecture allows us to easily create different front-end applications for a variety of users, including our local and remote students, faculty, consortium universities, and independent translators. It also allows separately constructed data modules to be seamlessly integrated with the main database, making it possible to add additional field-specific terms as needed. At the present time, the database design is done, and we have been implementing interfaces, of which the primary one is the Web, and adding content.

3. Network Services

Over the course of the grant, JPP has seen tremendous expansion in its network services. It has maintained an anonymous FTP site at which all of the publicly available software for handling Japanese text and Japanese language education on a variety of computing platforms have been collected. Thanks to a number of references in Ken Lunde's book, *Understanding Japanese Information Processing*, the program saw an

enormous increase in activity at this site. In the first year of the grant, we added additional disk space and upgraded the operating system to provide for expanded services.

In the spring of 1993, we initiated our World Wide Web service, which provides information about our educational programs, application information for potential students, information on upcoming workshops, biographical pages on our faculty and staff, reviews of current research, and other related topics.

In the second year of the program, we further expanded its network services by upgrading our FTP server. The FTP site continued to see heavy use both from within the program and from remote sites. We put a significant effort into updating the information contained in our World Wide Web-based "Guide to Japanese Resources," including improved integration between the Web site and the FTP site.

4.   Remote Site Services

Remote site services have also undergone change as technological developments have been put into use.

In March of 1994, our network manager visited each of our remote sites and talked to network managers at each place. He reported three barriers to our original proposal to provide network services for all of our remote students. The first barrier was volume of students: we had accepted twice as many students as we originally proposed.

The second problem was network access at work. Due to the sensitive nature of much of the research done at the sites (especially Boeing and the Naval Air Warfare Center), network communications were strictly controlled. As a result, most of our students did not have easy and consistent access to the Internet to reach the services we provided. In many cases, special permission was required just to send or receive electronic mail.

The third barrier was the physical distribution of the students. Our original proposal indicated that the students would be sharing a central computer at each site. From a practical point of view, that proved to be impossible, because students were widely distributed within their companies and could not afford to get together more than once a day.

Our network manager proposed that we bypass these problems by becoming Internet providers ourselves, giving students direct access from home or work machines equipped with modems. His survey indicated that the majority of our students had home computers with a modem. In addition, those students who did not already have a computer said that they would consider it a worthwhile investment to buy one if it allowed them to connect to our services.

So, in an effort to provide direct dial-in service to our program, we installed an eight-line dial-in server with support for TCP/IP connections using Point to Point Protocol (PPP). This server has performed well.

In addition to the dial-in server, we changed our e-mail system to one better suited to remote users. This system also provided excellent support for Japanese-capable e-mail clients, allowing students and faculty to exchange e-mail in Japanese. Being able to communicate with our remote students via e-mail has been an invaluable aid. Although we arrived at workable solutions for our remote communication problems, this is an area that bears further study: how best to coordinate communication with remote instructors and

students, using their technology and ours, dealing with variable schedules, and being efficient and cost-effective all the while.

J.   *Workshops and Symposiums*

1.   Workshop: Teaching Technical Japanese, September 9-10, 1994

The workshop "Teaching Technical Japanese" was held September 9-10, 1994 on the campus of the University of Washington. It was attended by 60-some professionals in the field from around the country. A schedule of this workshop appears in Appendix 2.

The workshop had three major objectives, divided into eight sessions. The objectives were: to discuss the status of technical Japanese education in the United States; to exchange information and ideas—methods, strategies, resources; and to talk about future collaboration.

Sessions were structured as panel discussions, with four to five panelists and one moderator.

Among the special attendees and panelists were: Professors Akira Komai, Shunichi Kato and Matsuo Soga of Nanzan University; Keiji Shono, Deputy Director of the Japan Foundation Language Center in Santa Monica, California; and four technical specialists—Mark Argyle of Idaho National Engineering Labs, Ben Krug of the National Naval Air Force Center in Indianapolis, Indiana, and Ryan Edge and Mike Yamashita, both of Boeing.

Participants reported that the workshop was extremely valuable in several ways. First, technical Japanese is a fairly specialized discipline, and most teachers and students in it are unique in their geographic region. This workshop gave them the chance to get together with others in the field and exchange notes. It was also a great learning experience, as everyone pooled their experiences and resources and learned from each other. Finally, it was valuable to look at ways to work together to develop and expand the discipline.

Specific content included: the history and development of the field, the various audiences/market for the subject and their varying needs, how to market technical Japanese programs, various approaches on how to teach the subject, curriculum design for both reading and oral skills, basic goals of the different programs, how students use the knowledge gained, student motives in studying technical Japanese, how scientific Japanese differs from Japanese for general purposes, skills that are most important to intern host companies in their internees, difficulties encountered in distance language learning programs, relationships between technical Japanese programs and other university language units, teaching technical Japanese with no technical background, use of technology, and authentic versus specially created materials.

2.   Symposium

JPP had originally planned to host a symposium on "Japanese Scientific and Technical Information Access and Transfer" during this grant period. This proved not to be feasible for several reasons. Other JITMT centers were hosting many such symposia and conferences during the same period, and it was felt that an effort by JPP to add another such symposium to the already full roster could only diminish and weaken the other ones. Secondly, due to the sudden start-up of an entirely new program, the greater-than-expected

enrollment in JPP and the immediate demands on staff time to plan intensive sessions and special courses and coordinate remote site operations, staff were overworked. We simply experienced a shortage of resources.

IV. Written Publications

The Technical Japanese Newsletter was published annually during this period. The fourth issue appeared in the spring of 1994, with an article on JPP, a report of a University of Washington Technical Japanese student's summer internship in Japan, a review of the book *Understanding Japanese Information Processing*, and introductions to other JITMT centers. The fifth issue appeared in spring of 1995, with an article on JPP's first year and an account by a JPP student of his trip to Japan, a report of a UW Technical Japanese student's summer internship in Japan, and a report of the "Teaching Technical Japanese" workshop hosted by JPP and held at the University of Washington in September, 1994. The sixth issue appeared in the summer of 1996, with a report on an internship by a Technical Japanese student, a description of the University of New Mexico's Technical Japanese course sequence, and a description of Nihongo Partner, a multi-media language learning tool under development by staff.

We also posted our "Guide to Japanese Resources" on our World Wide Web site, at URL: <http://www.tjp.washington.edu/>. Included in this guide are pages pertaining to Japanese Software, Documentation and Publications, and Internet Resources. Issues of our newsletter are also posted on our web site.

Articles in refereed journals, and other publications by JPP personnel that appeared during this period included the following:

* "Meeting the Increasing Need for Internationally Trained Engineers: A Review of Technical Japanese Training in the United States," by Michio Tsutsui, *Proceedings of the 1996 American Society for Engineering Education Annual Conference*, 6 pp., also published on CD-ROM, June, 1996.

* *Maclopedia*, co-authored by Brad Mohr, published by Hayden Books, 1996.

* *A Dictionary of Intermediate Japanese Grammar*, by Michio Tsutsui, with Seiichi Makino, published by The Japan Times, 1995.

* *Planning and Managing Web Sites on the Macintosh*, co-authored by Jon Wiederspan, published by Addison-Wesley Developer's Press, 1995.

* "Curriculum Development for Technical Japanese: A Case in the United States," by Michio Tsutsui, *Current Reports on Japanese Language Education around the Globe*, vol. 1, pp. 217-227, 1994.

* "Technical Translation or Technical Japanese?" by Michio Tsutsui, *Proceedings of the NTIS/JICST Conference on How to Locate and Acquire Japanese Scientific & Technical Information*, pp. 389-399, 1993.

V. Professional Personnel Associated with Program

A. *UW Professional Personnel - Administrative*

1. **Michio Tsutsui, Co-Principal Investigator**, Director of JPP, Associate Professor, and Director of the Technical Japanese Program, received a Ph.D. in Linguistics from the University of Illinois in 1984, and a B.S. in Naval Engineering from Osaka University in 1970. Before coming to the University of Washington in 1990, Dr. Tsutsui was Director of the Japanese Language Program at M.I.T., which he initiated and developed. He co-authored *A Dictionary of Basic Japanese Grammar*, and *A Dictionary of Intermediate Japanese Grammar* with Seiichi Makino.

2. **Paul Young, Former Co-Principal Investigator** for the grant during its first year, until he obtained another job at the National Science Foundation in Washington, D.C. Dr. Young was also Associate Dean for Research, Facilities, and External Affairs in the College of Engineering, and Professor in the Department of Computer Science and Engineering during the time he was co-P.I. for JPP. He served as External Liaison for JPP, representing the program to outside corporations, organizations, and governmental bodies.

3. **Mark Damborg, Co-Principal Investigator**, and Associate Dean of Research and Facilities for the College of Engineering and Professor of Electrical Engineering, received a Ph.D. in Electrical Engineering from the University of Michigan in 1969. Before coming to the University of Washington, Dr. Damborg worked at the U.S. Department of Energy. He has provided consulting services for many companies, including Battelle Pacific Northwest Laboratories, Boeing Computer Services, and Puget Sound Power and Light Company. Dr. Damborg took over as co-Principal Investigator when Paul Young left.

4. **Mark Haselkorn, Administrative Advisor**, is also Professor and Chair of the Department of Technical Communication. Dr. Haselkorn received a Ph.D. in English from the University of Michigan in 1977. He has served as PI for many recent grants, including "Enhancement, Evaluation, and Delivery of Real-Time Commuter Information" for the Washington State Department of Transportation, and "Policy Implications of Advancing Electronic Technology at the State and Local Level for Printing and Dissemination of Federal Information" for the Office of Technology Assessment.

5. **Masashi Kato, Curriculum Design Advisor**, is Lecturer in the Technical Japanese Program. He is currently a Ph.D. candidate in Urban Planning at the University of Washington. Mr. Kato received his Master's Degree in the same field from the University of Washington in 1980. He taught Japanese professionally for six years at high schools and community colleges before coming to the University of Washington.

6. **Miriam Rich, Program Manager** for the Japanese Program for Professionals as well as for the Technical Japanese Program, received a Master's of Arts in Teaching from the University of Chicago in 1983. She also holds a Master's of International Management from the American Graduate School of International Management (Thunderbird), which she received in 1989. Ms. Rich has been a high school foreign language teacher, and manager of international affairs for The American Public Works Association before joining the Japanese Program for Professionals.

1.   **Sandra Mizuno, Former Chief Instructor**, held a B.S. degree in math and science, which she received from the University of Washington in 1987. She also held a teaching certificate in Japanese and Math from the University of Washington. Ms. Mizuno taught high school Japanese and math for six years before becoming part of JPP. She left JPP in December, 1994 to pursue other opportunities.

2.   **Keiko Nakamura, Chief Instructor**, received her Master's degree in East Asian Studies from the University of Illinois at Champaign-Urbana in May of 1995, and joined JPP in June.

3.   **Jerry Sullivan, Special Course Instructor**, is Professor of Business Communications, Marketing Transportation and International Business in the Department of Marketing and International Business at the University of Washington School of Business Administration. Dr. Sullivan is a nationally-recognized scholar on Japanese management and author of the critically acclaimed book, Invasion of the Salarymen, The Japanese Business Presence in America. He has taught courses in international business at the University of Washington since 1978 and has research ties with several Japanese institutions, including: the Japan Economic Research Center, the International House of Japan, Doshisha University and Hitotsubashi University.

4.   **Marie Anchordoguy, Special Course Instructor**, is Assistant Professor of International Studies in the Henry M. Jackson School of International Studies, where she has been a faculty member since September 1989. Prior to that, she was Research Fellow at the Harvard Business School. Recently, she was Visiting Research Professor at Hitotsubashi University, funded by Monbusho (Japanese Ministry of Education). Dr. Anchordoguy has researched extensively the Japanese computer industry and published a book on the subject in 1989, *Computers Inc.: Japan's Challenge to IBM*.

5.   **Paul Liu, Special Course Instructor**, is Associate Director of Competition, Trade and Technology Projects in the Asian law Program at the University of Washington School of Law and Adjunct Professor of Law. He has also been Associate Director of the Center for Law, Science, and Technology at the University, and Associate Professor at National Taiwan University. Dr. Liu received his Ph.D. in Law in 1983 from the University of Washington. His numerous books and articles focus on Asian law as it relates to intellectual property, computer law, and commercial law.

6.   **John Haley, Special Course Instructor**, is Director of the Asian law Program, Professor in the School of Law, and Adjunct Professor of East Asian Studies. Professor Haley holds degrees from Princeton University, Yale Law School, and the University of Washington. He lived in Japan for over five years as a teacher and a lawyer with the law firm of Blakemore and Mitsuki, as a Senior Fulbright Research Scholar at Kyoto University, and as Visiting Professor of Law at Kobe University. He was an Alexander von Humboldt research scholar at Freiburg University and Visiting Professor at Harvard Law School, Monash University in Melbourne, Australia, and at Tubingen University in Germany. Professor Haley has authored numerous articles on Japanese law and for over a decade was editor-in-chief of *Law in Japan: An Annual.*

1.   **Jon Wiederspan, Former Software Specialist** with JPP, received a B.S. in Computer Science from the University of Washington in 1990. He then joined the Technical Japanese Program, and served as Computer Consultant to the program until August, 1995, when he left to pursue other opportunities.

2.   **Dave Buzard, Former Network Systems Manager**, received a B.S. in Marketing from California Polytechnic University at Pomona in 1988. He has worked as a computer consultant for NYNEX, KPMG Peat Marwick, Hacienda La Puente Unified School District in Los Angeles, and the State of California Adult Education Department. Dave left JPP in August, 1995 to pursue other opportunities.

3.   **Brad Mohr, Senior Computer Specialist**, has a B.S. in Chemical Engineering from Rensselaer Polytechnic Institute, and has worked as a self-employed Macintosh Programming Consultant, a technical editor for "Macintosh Programming Starter Kit," and as a Product Development Engineer for S. D. Warren Research Lab in Westbrook, Maine. He replaced Mr. Wiederspan and Mr. Buzard in August, 1995. Recently, Brad co-authored Hayden Books' Maclopedia, an encyclopedia for everything relating to Macintosh computing.

B.   *Professional Personnel at Participating Sites*

1.   Battelle Pacific Northwest National Labs, Richland, Washington

Participants Who Completed JPP:	Job Title
Judi Cuta	Senior Development Engineer
Peggy Hamilton	Research Scientist
Carol McDonald	Research Engineer
Pete McGrail	Staff Scientist
Ron Palowski	Research Engineer
Colleen Winters	Technical Communications Specialist

Former Participants:	
Tom Adams	Staff Scientist
Frank Garner	Senior Staff Scientist
James Hardin	Staff Scientist

2.   Idaho National Engineering Labs, Idaho Falls, Idaho

Participants Who Completed JPP:	Job Title
Idaho Operations:	
Wendy Carlson	Technical Support Program Staff
Bill Harker	Program Manager, Infrastructure Management
Walter Sato	Manager, Waste Programs Office
James Werner	Team Leader, Office of Program Execution, Nuclear Engineering
John Yankeelov	General Engineer, R&D Programs, Electrical Engineering
Lockheed*:	
Mark Argyle	Engineering Specialist, Chemical Engineering

Frank Bruneel	Mechanical Engineer
Stephen Herring	Sr. Engineering Specialist, Nuclear Engineering
Dean Miyasaki	Engineering Specialist, Chemical Engineering
Frank Roberto	Scientific Specialist/Technical Leader, Molecular Biology

Former Participants:

Jonathan Nadler	Nuclear Engineer
Kristine Svinicki	Nuclear Engineer
Eugene Hochhalter	Manager, Waste Handling & Project Liaison, Nuclear Engineering
Judy Lussie	Engineering Graphics Supervisor
Tom Dolan	Principal Scientist, Nuclear Engineering
Jeffrey Mousseau	Project Manager, Waste Management, Mechanical Engineering
Scott Spaulding	Manager, Mechanical Engineering Unit, Civil Structural/Mechanical Engineering

* The contracting agency for INEL was EG&G Westinghouse until October, 1994, at which time it switched over to Lockheed.

3.   Naval Air Warfare Center, Indianapolis, Indiana

Participants
Who Completed JPP: Job Title

Ben Krug	Project Area Leader, Electrical Engineering, Platform Sensor System
Judith Mackenzie	Lead Engineer, Materials, Manufacturing and Systems Engineering
Trung Nguyen	Avionics Software Engineer
Celeste Sexton	Project Leader, Electrical Engineering

Former Participants:

| David Lutzow | Project Leader, Electrical Engineering |
| Andy Price | Project Leader, Bio-Engineering |

4.   Boeing, Seattle-area (two sites: Everett and Renton), Washington

Participants
Who Completed JPP: Job Title

Tim Adams	Structures Analyst
Val Brustad	Research Engineer
Lou DeLeon	Lead Engineer
William Dutcher	Engineer
Ryan Edge	Senior Engineer
Bharat Kapadia	Senior Specialist Engineer
David McKenna	Engineer
Kenneth Medley	Specialist Engineer
Linnea Roeser	Payload Lead Engineer
Aniceto Seto	Engineer
David Tarr	System Design Engineer
Hal Underwood	Engineer
David Wakabayashi	Engineer

Former Participants:
Kerry Kimes   Engineer
Susan Ng   Engineer
Richard Nguyen   Engineering Representative
Roshan Vasudev   Engineer
Nathan Wilson   Engineer
Michael Yuen   Engineer
Sharon Yuen   Senior Engineer

VI.   Coupling Activities

A.   *Presentations at Meetings, Conferences, and Seminars, from September 1993 - September 1996*

1.   "Meeting the Increasing Need for Internationally Trained Engineers: A Review of Technical Japanese Training in the United States," by Michio Tsutsui at the Annual Conference of the American Society for Engineering Education in Washington, D.C. in June 1996.

2.   "Distance Learning with Nihongo Partner," presented by Masashi Kato at the Computer Assisted Language Instruction Consortium (CALICO)'s 13th Annual Symposium at the University of New Mexico, New Mexico in May 1996.

3.   "Nihongo Partner - Interactive Multimedia Program for Oral Communication Training," presented by Masashi Kato at the Washington Association of Foreign Language Teachers/Council on Oregon Foreign Language Teachers Joint Conference, in Portland, Oregon in October 1995.

4.   "Technical Japanese Education in the United States," by Michio Tsutsui at the International Student Center at Osaka University in Osaka, Japan in August 1995.

5.   "Two Programs for Engineers and Scientists at the University of Washington," by Michio Tsutsui at the Fourth Annual NTIS/JICST Conference in Boston, Massachusetts in July 1994.

6.   "Japanese Language Training in the United States: Current Situation and New Trends," presented by Masashi Kato at the ALC Publishing Company Public Lecture Series in Tokyo, Japan on July 23, 1994.

7.   "Japanese Language in Culture: How to Integrate Culture in Japanese Language Teaching," presented by Masashi Kato at the Spring Conference of the Northeast Association of Secondary Teachers of Japanese in New York, New York on April 10, 1994.

8.   "Technical Japanese Instruction for Engineering Students," by Michio Tsutsui at the March 1994 conference of the Association for Asian Studies in Boston, Massachusetts.

9.   "Keeping Abreast of Japanese Technology: JPP," presented by Michio Tsutsui at the Association of Japanese Business Studies' 7th Annual Meeting in Vancouver, B.C., Canada in January 1994.

10.	"The Technical Japanese Program at the University of Washington," presented by Masashi Kato at the Association of Japanese Business Studies in Vancouver, B.C., Canada in January 1994.

11.	"Nihongo Tutor and Non-Verbal Skills in Oral Communication Training," presented by Masashi Kato at the 27th Annual Meeting of the American Council on the Teaching of Foreign Languages (ACTFL), in San Antonio, Texas in November 1993.

12.	"A Kanji/Vocabulary Self-learning System," presented by Michio Tsutsui at the Annual Meeting of the American Council on the Teaching of Foreign Languages, in San Antonio, Texas in November 1993.

B.	*Consultative and Advisory Functions to Other Labs and Agencies (DOD/DOE)*

Nothing throughout the grant period.

VII.	New Discoveries

A.	*Course Delivery* (See III.D)

B.	*Internships* (See III.H)

C.	*Communication with Remote Sites* (See III.I.4)

D.	*Findings From Student Evaluations*

At the end of the two year program, JPP students were asked in a detailed survey to evaluate the course in terms of content, instructors, delivery methods, logistics and overall value. Results were very positive, although they did point to areas that the program could improve. Ninety-four percent of the respondents felt that they had achieved the program goals in all the major areas of grammar, conversation, reading, kanji (Chinese characters) recognition, and culture/society. Seventy-one percent of the respondents said that they would whole-heartedly recommend the program to their friends; the others would recommend it with a few qualifications. These are decidedly positive results for a unique, first time program.

Suggestions students made for the program included: greater recognition of the time demands placed on them by their jobs, more emphasis on oral communication skills, and more consistency in policies and teachers. The most common complaint was the frustration expressed at not having enough time to study. As much as anything, this reflects the demanding nature of jobs today, in which employees are asked to take on more and more work as companies restructure and downsize. Boeing employees, for example, are often asked to work mandatory overtime of 60 hours or more per week. This leaves them little time for their personal life, much less for a demanding language program. Additionally, Boeing employees are often required to travel one to three weeks at a time for work, and may have very little notice of this beforehand.

Thus, it was not surprising that students rated "study time" and "management support" as the top two things that participants need to secure in order to be successful.

Peer support and drill instructor support were listed as being key factors in helping students stay motivated in spite of the pressures. This confirmed that our structuring of the course to provide this support was right on track.

Students also reported that having the live site instruction was a major aid in helping them achieve program goals. This confirms our belief that some personal contact is essential for obtaining optimal results in language learning. It is not critical to have the interaction during the lecture, however; the majority of students rated as "not critical" the live broadcasts.

Finally worth mentioning here is a response to students' call for "consistency in policies and teachers." Because this was the *first* round for this program, there were bound to be changes as we sought to correct our course and work the kinks out. Successful programs are always dynamic; that we had such high student motivation as evidenced by the low attrition rate, and such positive results overall as evidenced by student statements about JPP (see Appendix 3) is testimony to the achievement of the program.

E. • *Difficulties of Distance Language Learning*

Although the Japanese Program for Professionals is a "distance" learning program, it is different from most because of the on-site drill instructors. For this reason it might be viewed as a "modified" distance learning program. This makes it far more effective than just using a satellite to deliver lectures, for example.

However, we did encounter several difficulties with this mode of instruction. They related to: coordination of personnel, evaluation and monitoring of students, and feedback delays.

Coordination of the drill instructors was often a challenge, as we sought to provide consistent, standardized instruction at all five sites using the unique talents of five different drill instructors. All of the five were different in terms of their quality and style of teaching. We found that disseminating core concepts to the students through the drill instructors, and to do this at a remove was not always easy. We attempted to use each instructor's style and strengths to the best advantage while maintaining the same level and consistency of teaching.

For the evaluation of students, we had to rely heavily on the drill instructors and their assessments. This is a weakness of the distance set-up. The only occasion for direct contact was when the Chief Instructor visited the site, or during intensive sessions. In the mean time, scores for many homework assignments, quizzes and tests were reported in. These are only numbers, though, which do not give a complete picture of a student's performance. A test score, for example, will not show how a student arrived at the answer to a question. Two students may both get the same question wrong, but one might be much closer to the answer. For accurate evaluation there is really no substitute for being in the class day after day with the students.

Finally, feedback to the students was not always prompt or direct, and this was also less than optimum. With language learning, immediate reinforcement or correction is ideal. We were not always able to achieve this, although we used all options at our disposal: phone, e-mail, fax.

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F.   *Difficulties of Teaching Language to Professionals*

The chief difficulty in teaching professionals related to their busy schedules and split loyalties; professional researchers and business people have primary accountability to their jobs, secondary accountability to any outside activities, such as JPP. Obviously they are different from college students, and so instructors cannot push them in the same way one might college students. They often had to work over-time, or travel for work, as discussed above in D, "Findings From Student Evaluations." In general, though, we found the students to be highly motivated, as they saw the direct usefulness of what they were learning and how it would help them in their work with Japanese.

Another key element in working with professionals, we discovered, is management support. Because students are already facing great odds in participating in the program just in dealing with the added time pressures, support from their management is critical for them and affects how well they perform. Management executives often see this kind of program as detrimental rather than advantageous; they see it drawing time and energy away from an employee's main function: his or her job. Moreover, management often expects instant results; if not, they withdraw support. It was often difficult for managers to understand that students would not be fluent in Japanese after two years, but that the program was still worthwhile.

Students who had management support, and not just financial, but an understanding of and commitment to the program on the part of their supervisors, were much more likely to succeed in the program. This points out the need for education of managerial executives to the long-term benefits of this kind of human capital investment.

G.   *Major Findings From Workshop*

The workshop on "Teaching Technical Japanese," held on the campus of the University of Washington September 9-10, 1994, is mentioned in III. J.1 above. As stated there, the objectives were to discuss the status of technical Japanese education in the United States, to exchange information and ideas, and to talk about future collaboration.

The major findings from this workshop included the following:

- People study Japanese for different purposes, some needing it for interaction, some for information gathering; because the audiences are different, it is important to determine what the target audience's needs and motives are in studying Japanese before you design your curriculum.

- Scientists and engineers want to learn more practical material than that which is generally taught in general Japanese classes. It is important to keep this in mind in designing curriculum for them. However, it is not necessary for a technical Japanese instructor to have technical knowledge in order to be effective.

- Publicizing Technical Japanese programs is important; they need to be more visible to university administration, government, and industry. For the Department of Defense, it is important to have in-house technical Japanese capability as it expands their marketability. It is important also to position Technical Japanese programs effectively within universities so that they do not challenge existing Japanese programs, yet still serve all appropriate segments of the student body.

- The best way to publicize TJ programs within industry is to let the employees do it from within. Upper-level management, ironically enough, is often not aware of their own employees' needs.

- Having internships is a definite asset to a program. Not only does it help reinforce what students have learned, it is also a great incentive. However, it is also very costly! One difficulty with internships is that Japanese host companies and internees have conflicting wishes on the length of the assignment: host companies prefer longer assignments, while internees prefer shorter ones. This can be difficult to resolve. One idea put forth at the workshop was to survey Japanese host companies to see what sort of problems they encounter. This would help in the preparation of future interns.

- Participants suggested putting together a catalog of technical Japanese programs with syllabi and contact information, so that all of this information would be combined in one resource.

VIII. Additional Statement

Grant Period Extension

JPP began one term later than the proposed date—March, instead of January, 1994—because more time was needed for program promotion and development. Coursework for Round I ended in December, 1995. We applied for and received a no-cost extension through June, 1996 in order to accommodate anticipated internships; although these did not transpire, we used the time to work on our two computer projects: Nihongo Partner and TJ Tutor.

We applied for and were granted a second no-cost extension through September 30th, which has allowed us to continue to work on these projects and provide our promised cost-sharing. The additional summer months were valuable because the necessary equipment and technical support are more available then and we could be much more productive; during the regular school season they are in high demand, making the projects difficult to work on.

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JPP 4-Day Intensive Session Teaching Schedule

	3/23 Wed.	3/24 Thu.	3/25 Fri.	3/26 Sat.	3/27 Sun.
8:00		Breakfast	Breakfast	Breakfast	Breakfast
9:00 / 9:50		SESSION I Intro to JPP Greeting/Intro Drill *Mizuno/SF*	SESSION I Entering/Exiting Thanking/ Apologizing *Mizuno/SF*	SESSION I Skits Review past two days *Mizuno/SF*	SESSION I Personal Appt Time *Mizuno/SF*
10:00 / 10:50		SESSION II *Ohayoo Konniti wa Konban wa Oyasumi nasai* *Mizuno/SF*	SESSION II More from above Classroom Phrases *Mizuno/SF*	SESSION II Business Greetings *Mizuno/SF*	SESSION II Drills on Appointments Overall Review *Mizuno/SF*
11:00 / 11:50		SESSION III Pronunciation Writing System *Mizuno/SF*	SESSION III *Hiragana* *Mizuno/SF*	SESSION III Lecture on #s Time *Mizuno/SF*	Testing: Written / Spoken *Mizuno/SF*
12:00		*Lunch*	*Lunch*	*Lunch*	*Lunch*
1:00 / 1:50		**Lab:** Q&A How to use Audio Tapes SF Drills *SF*	**Lab:** Q&A How to study / ask Qs Work on Skit Hiragana review *SF*	**Lab:** Q&A Receiving / submitting HW, handouts Individualized drill section *SF*	**Lab:** Review Tests *SF*
2:00 / 2:50		Society & Culture Annual Events *Kato*	Society & Culture Japanese Educational System *Kato*	Society & Culture Human Relations in Japan *Kato*	Goal Setting: Goals for month Self-evaluations Session evals *Kato* ... *Mizuno*
3:00 / 4:00		Case Study: Foreign Companies in Japan *Kato/Guest*	Case Study: Company Men: Japanese Employment Sysytem *Kato/Guest*	Case Study: 1st Experience in Japan Guest speaker: *Kevin Johnson* *Kato/Guest*	Closing & Check Out
4:00 / 5:00	Registration & Check In *All*				
5:00 / 6:00	Introductions *Tsutsui*	Self Study	Self Study	Self Study	
6:00	*Dinner*	*Dinner*	*Dinner*	*Dinner*	
7:30 / 9:00	Team Building Activities *Mizuno*	Self Study	Cultural Enrichment *Mizuno*	Self Study	

JPP 4-Day Intensive Session Schedule

Time	Wed, 10/5	Thu, 10/6	Fri, 10/7	Sat, 10/8	Sun, 10/9
8:00		Breakfast	Breakfast	Breakfast	Breakfast
9:00 / 9:50		SESSION I — Drill	SESSION I — Drill	SESSION I — Drill	SESSION I — Review Tests oral & written
10:00 / 10:50		SESSION IIF — Drill	SESSION IIF — Drill	SESSION IIF — Drill	SESSION II — Goal Setting
11:00 / 11:50		SESSION III — Drill	SESSION III — Drill	SESSION III — Drill	Closing & Check out
12:00	Registration & Check In/Lunch	Lunch	Lunch	Lunch	
1:00 / 1:50	Welcome Remarks (from 1:30)	Information Session Computer (Jon) Network (Dave)	Information Session Internship	Self-Study	
2:00 / 2:50	Report from 5 Sites	Society & Culture Japanese Etiquett	Case Study Working as an Intern in Japan Mike Yamashita Tom Moye Breck Haining TK Hayashi	Testing: Written	
3:00 / 4:00		Case Study Working with Japanese Men - Women's Point Of View Kay (ACE) Sakai (JAL)		Testing: Oral	
4:00 / 5:00	Report from Chief Instructor & Site Facilitators	Self-Study	Field Trip to Downtown Seattle	Society & Culture Sumo	
5:00 / 6:00	Self-Study	Dinner		Dinner	
6:00	Dinner			Cultural Enrichment	
7:30 / 9:00	Jeopardy				

Spring Three-Day Intensive Session

	Thurs.(3/30)	Fri.(3/31)	Sat.(4/1)
8:00	Breakfast	Breakfast	Breakfast
9:00 | 10:15	Registration Opening Session (from 9:30)	Drill Session: Topics 5/6/7/8	Preparation for Skit Presentation (9:00 - 11:00)
10:30 | 11:45	Drill Session: Topics 1/2/3/4	Drill Session: Topics 5/6/7/8	Information Session on Internship (optional) (11:00 - 12:00)
12:00	Lunch	Lunch	Lunch
1:30 | 2:45	Drill Session: Topics 1/2/3/4	Drill Session: Topics 5/6/7/8	Skit Presentation (1:30 - 3:30)
3:00 | 4:15	Drill Session: Topics 1/2/3/4	Drill Session: Topics 5/6/7/8	Discussion and Comments (3:30 - 5:00)
4:30 | 5:30	Learning Stations (till 5:15)	Individual Tutoring/ Consultation	Evaluation and Closing Session (5:00 - 6:00)
5:30	Dinner/Free Time	Dinner/Free Time	Dinner/Free Time Visit Kinokuniya (optional)
7:30 | 8:15	Drill Session: Topics 1/2/3/4 (7:15 - 8:30)	Learning Stations	
8:15 | 9:00	Q/A for Open House Visitors (with students)	Learning Stations	

Fall Three-Day Intensive Session
October 5, Thursday - October 7, Saturday

Schedule

	Thurs.(10/5)	Fri.(10/6)	Sat.(10/7)
8:00	Breakfast	Breakfast	Breakfast
9:00 | 10:15	Registration Opening Session (from 9:30)	Drill Session V: Topics 5/6/7/8/9	Preparation for Skit Presentation
10:30 | 11:45	Presentation: Human relations and language in a Japanese office	Drill Session VI: Topics 5/6/7/8/9	
12:15	Lunch	Lunch	Lunch
1:00 | 2:15	Drill Session I: Topics 1/2/3/4	Drill Session VII: Topics 5/6/7/8/9	Skit Presentation (1:30 - 3:30)
2:30 | 3:45	Drill Session II: Topics 1/2/3/4	Drill Session VIII: Topics 5/6/7/8/9	Discussion and Comments (3:30 - 5:00)
4:00 | 5:15	Drill Session III: Topics 1/2/3/4	Drill Session IV: Topics 5/6/7/8/9	Evaluation and Closing Session (5:00 - 6:00)
5:15	Dinner	Dinner	Dinner
7:00 | 8:15	Drill Session IV: Topics 1/2/3/4	Self-study (All the teaching staff are available for extra practice/help)	Visit Kanda area (optional)
8:15 | 9:00	Self-study (All the teaching staff are available for extra practice/help)		

Technical Japanese Workshop
September 9 - 10, 1994

	Friday, September 9	Moderators/Discussion Leaders
8:00	**Registration and Coffee**	
8:40	**Welcome remarks and Objectives**	Tsutsui
9:00	**Session 1** **Current State of Technical Japanese:** **Overview** (Tsutsui) **Report on U.S.-Japan Seminar** (Mills) **Report on a Survey by Nanzan Univ.** (Kato, S.)	
10:15	*Break*	

10:30	**Session 2**
	
	Curriculum Design I: Reading Skills
		Moderator: Dasher
		
		DLs: Davis
		         Mills
		         Tsutsui
		         Krug
		         Yamashita

12:00	*Lunch and Display*	

2:00	**Session 3**
	
	Curriculum Design II: Oral Skills
		Moderator: Fukada
		
		DLs: Kato, M.
		         Russell
		         Tohsaku
		         Edge
		         Yamashita

3:30	*Break*	

3:45
 	
|
 	
5:15
	Session 4
	
	Curriculum Design III:
	    General Japanese for Engineers
	    and Scientists
		Moderator: Tohsaku
		
		DLs: Davis
		         Mizuno
		         Kataoka
		         Argyle
		         Krug

All sessions will be held in Balmer Hall, Room #413.
A small computer laboratory will be available in Room #309.
Coffee is available in Room #415.

	Saturday, September 10	Moderator/Discussion Leader	
8:00	Coffee and Rolls		
8:20	Session 5 Teaching with no Technical Background	Moderator: DLs:	Kato Fukada Mills Unedaya Zon
9:50	Break		
10:05	Session 6 Use of Technology/Demonstration	Moderator: DLs:	Russell Davis Fukada Kato Tsutsui
12:00	Lunch and Display		
1:30	Session 7 Materials Development	Moderator: DLs:	Mizuno/ Kato Dasher Mills Unedaya Tohsaku
3:00	Break		
3:15	Session 8 Future Collaboration	Moderator: DLs:	Tsutsui Dasher Kataoka Russell Zon
4:45 | 5:00	Closing	Tsutsui	

What Participants Say About the Japanese Program for Professionals

I am now able to travel in Japan without having my hand held every step of the way by my Japanese hosts. My anxiety level in airports, train stations, subways and taxi stands has dropped enormously. Second, my study of the language has helped enormously in my efforts to develop trust and credibility with potential Japanese customers. In every case, my attempts to use my limited Japanese have impressed them very favorably and aided in the development of good working relationships.

—Frank Garner, Senior Scientist in Nuclear Engineering
Battelle/Pacific Northwest Labs, Richland, Washington

During a recent business trip to Japan, I arranged a meeting with one of my Japanese clients in Tokyo. At the meeting, I gave my introductory remarks in Japanese. Just before I started, Mr. Ito apologized for having to leave to attend another meeting. I began my introduction. After my first few words, Mr. Ito said, "I am staying for this." He remained for the entire presentation, even though I switched to English after my introduction. The look of shock on my hosts' faces as I spoke in Japanese will stay with me for a long time. Later, the manager told me this was the first time a foreigner had ever given a presentation in Japanese.

—Pete McGrail, Staff Scientist in Nuclear and Chemical Engineering
Battelle/Pacific Northwest Labs, Richland, Washington

The dedicated JPP staff bring life to the structured curriculum, giving JPP students a broad, practical knowledge of Japanese language and culture. I have already found these skills to be a valuable asset working with our Japanese partners.

—Tim Adams, Structures Analyst
The Boeing Company, Seattle, Washington

I've really enjoyed taking part in JPP. One of the biggest advantages of this particular program is the daily on-site lectures and drill sessions. Another advantage is small class size. We've covered a great deal of language and cultural material which will be a great asset to me when I work with Japanese companies in the future.

—Linnea Roeser, Lead Engineer
The Boeing Company, Seattle, Washington

I soon realized that to have such quality instruction brought to your 'doorstep' was more than what I could have hoped for, and for those of us with hectic schedules, this made language instruction available without drastically upsetting anyone's daily routine.

—David Wakabayashi
The Boeing Company, Seattle, Washington

The convenience of taking classes at work allows you to participate in the program and still work a demanding, full-time job.

—Tim Adams, Structures Analyst
The Boeing Company, Seattle, Washington

Because we are working together with our peers, motivation remains high. And the JPP teaching staff are so dedicated—it really makes you want to do well. Plus, I can see immediate results. When I went to Japan recently, I realized my study of Japanese had made a huge difference. I was actually able to carry on conversations with people, and it seemed to mean a lot to them that I was trying to communicate in their language.

—Pete McGrail, Scientist in Nuclear and Chemical Engineering,
Battelle Northwest Labs, Richland, Washington

We are able to work with students from other sites, benefiting from their experience as well. The intensive sessions also allow us to practice cultural aspects of communicating, such as bowing, greetings, table manners, etc.

—Benjamin Krug, Project Area Leader
Naval Air Warfare Center, Indianapolis, Indiana

By bringing the classes to where I work, JPP has allowed me to fit Japanese into my schedule.

Mark Argyle, Scientist
Idaho National Engineering Labs, Idaho Falls, Idaho

The language and cultural awareness has already helped me in my relationships and dealing with Japanese people and business.

Walter Sato, Office of Policy, Assurance and Resource Management
Department of Energy, Idaho Falls, Idaho

The lectures have been well prepared, fast-paced, and stimulating. It was great to have lecture tapes available for classes I missed while traveling.

—Thomas Dolan, Head of Physics Section
International Atomic Energy Agency
United Nations, Vienna, Austria

Someone once said that language is a model of reality. This course has helped me to begin to understand a very different model from the one I grew up with in this country. As a result, I feel more connected to a world that I have only read about, and have perhaps developed some real understanding of the things that unite us as human beings, as well as the fascinating differences that make us so interesting to each other.

—Judith Cuta, Senior Development Engineer
Battelle Pacific Northwest Laboratory, Richland, Washington